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In The

Supreme Court of the United States

October Term, 1997

NEW IMAGE INDUSTRIES, INC.,

Petitioner,

vs.

HIGH TECH MEDICAL INSTRUMENTATION, INC.,

Respondent.

On Petition for Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

PETITION FOR WRIT OF CERTIORARI

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QUESTIONS PRESENTED

What is the proper role of the Federal Circuit when reviewing a district court's claim construction: can the Federal Circuit make new findings of fact as part of its *de novo* review; and what deference must the Federal Circuit give to a district court's findings of fact relating to claim construction?

Whether the public's right to notice of the scope of a patent claim overrides a patentee's interest in having the Federal Circuit correct a claim drafting error?

PARTIES TO THE PROCEEDING

The parties to the proceedings before the United States Court of Appeals for the Federal Circuit included High Tech Medical Instrumentation, Inc. and New Image Industries, Inc. On December 29, 1997 New Image Industries, Inc. was merged with and into Ceramco, Inc., a wholly owned subsidiary of Dentsply International Inc. New Image has no nonwholly owned subsidiaries. Dentsply has the following nonwholly owned subsidiaries: CeraMed Dental LLC, Stomatologia Dentsply (a.k.a. Stomadent), Maillefer Instruments, S.A., Manuplast (Switzerland), and Société Immobilière du Champs des Echelles (a.k.a. SICDE).

The other parties to the infringement action, Mr. Perry Michael Williams and AcuImage Corporation, were not involved in the proceedings before the United States Court of Appeals for the Federal Circuit.

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Petitioner New Image Industries, Inc. ("New Image") respectfully requests that a writ of *certiorari* be issued to review the judgment of the United States Court of Appeals for the Federal Circuit ("Federal Circuit") in this case.

OPINIONS BELOW

The unpublished decision of the United States Court of Appeals for the Federal Circuit vacating the District Court's order and remanding the case for further proceedings is reported at *High Tech Medical Instrumentation, Inc. v. New Image Industries, Inc.*, 1998 U.S. App. LEXIS 36111 (Fed. Cir. 1997). The corresponding judgment of the United States Court of Appeals for the Federal Circuit vacating the District Court's order and remanding the case is reported at *High Tech Medical Instrumentation v. New Image Industries, Inc.*, 135 F.3d 774, 1997 U.S. App. LEXIS 40582 (Fed. Cir. 1997). The order of the United States Court of Appeals for the Federal Circuit denying New Image's Petition for Rehearing is reported at *High Tech Medical Instrumentation v. New Image Industries, Inc.*, 1998 U.S. App. LEXIS 2640 (Fed. Cir. 1998). The order of the District Court granting New Image's motion and denying High Tech Medical Instrumentation, Inc.'s ("HTMI") cross-motion for partial summary judgment is reported at *High Tech Medical Instrumentation v. New Image Industries, Inc.*, 1995 U.S. Dist. LEXIS 9215 (N.D. Cal. 1995). The order of the District Court denying HTMI's motion for reconsideration is not reported.

STATEMENT OF JURISDICTION

The judgment of the Federal Circuit was entered on February 9, 1998. The Federal Circuit denied a timely Petition for Rehearing on February 2, 1998. The jurisdiction of the Court is invoked under 28 U.S.C. § 1254(1).

STATUTORY PROVISION AND RULE INVOLVED

The second paragraph of 35 U.S.C. § 112 provides:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The pertinent portion of Fed. R. Civ. P. 52(a) states:

> Findings of fact, whether based on oral or documentary evidence, shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge of the credibility of the witnesses.

STATEMENT OF THE CASE

The law is clear that the judge, and not the jury, is to construe the claims in a patent. What is not clear is the proper role of the Federal Circuit in reviewing a district court's claim construction. Specifically: (1) can the Federal Circuit make new findings of fact as part of its *de novo* review; and (2) what deference must the Federal Circuit give to a district court's findings of fact relating to claim construction? The public interest in understanding the scope of a patent claim is directly affected by these questions. In this case, new factual findings made on appeal led the Federal Circuit to adopt a secret, litigation-derived meaning of the claim element in dispute. The meaning adopted by the Federal Circuit is contrary to the accepted (ordinary) meaning and is not found anywhere in the patent. The public would never have notice of a claim meaning that is not found in the patent, not found in the record before the United States Patent and Trademark Office, and not known or understood by those skilled in the art.

A. United States Patent No. 4,858,001 and Reexamination Certificate B1 4,858,001

United States Patent No. 4,858,001 and Reexamination Certificate B1 4,858,[illegible] (collectively, the " '001 Patent") relate to a dental endoscope. A dental endoscope is a visual imaging device used by dentists to observe and display difficult-to-view areas of the mouth. The dental endoscope consists of a small video camera mounted in a thin tube. The signal generated by the camera is transmitted, via an external cable, to a processing system which can display or record the image. The thin tube can be placed inside a patient's mouth so that a dentist can obtain an electronic image of an area of the mouth. The image can then be displayed on a video monitor in a dentist's office or stored in electronic form for later use.

In 1990, the '001 Patent was reexamined by the United States Patent and Trademark Office. Claim 30 was added to the '001 Patent during the reexamination. The addition of claim 30 was the first time the phrase "opto-electrical componentry" was used in the '001 Patent. The meaning of the phrase "opto-electrical componentry" was never explained by the inventors.

Claim 30 of the '001 Patent, the only claim at issue, is set forth below with the language at issue in italics:

> 30. A dental endoscopic apparatus comprising:
>
> a rigid elongated handpiece having a proximal end and a distal end;
>
> a flexible cable having one end coupled to said proximal end and another end adapted for coupling to video imaging equipment;

> a housing removably coupled to said distal end of said rigid elongated handpiece;
>
> a sensor for sensing an image of a selected target, said sensor being coupled to said rigid elongated handpiece and said flexible cable, said sensor extending into said housing;
>
> *opto-electrical componentry extending from said sensor through said handpiece to said cable*; and
>
> an objective element positioned in said housing and arranged to focus an image of a selected target upon said sensor when said housing is coupled to said rigid elongated handpiece.

The ordinary meaning of opto-electrical componentry is a transducer — a device which converts optical power to electrical signals or which converts electrical signals to optical power. Interpreting claim 30 in accordance with the ordinary meaning of opto-electrical componentry causes claim 30 to require an infringing device to have two transducers (a "sensor" and "opto-electrical componentry").

B. New Image's AcuCam Camera

New Image's AcuCam camera includes a handpiece having a camera head and a lens unit. The camera head includes a charge coupled device ("CCD") transducer, a circuit board, a flex circuit and a connector. In operation, light incident upon the CCD is converted into electrical signals which are propagated to electrical devices on the circuit board and the flex circuit. The components on the circuit board and the flexible circuit are standard electrical components each of which accepts an electrical signal at an input

and produces an electrical signal at an output. None of these electrical components convert optical power to electrical signals or electrical signals to optical power. The connector couples the CCD assembly to the cable. The cable transmits the electrical signals to a processor (which is external to the handpiece), and the processor converts the electrical signals received from the CCD into a video signal to be displayed on a television monitor.

C. Proceedings Before the District Court

On November 23, 1993, HTMI filed the underlying action against New Image and concurrently filed a motion for a preliminary injunction with respect to claims 24 and 30 of the '001 Patent. The District Court's jurisdiction was based on 28 U.S.C. § 1338(a). The District Court issued a preliminary injunction based on claim 24. The Court of Appeals for the Federal Circuit ("Federal Circuit") reversed the District Court's order and held that the AcuCam camera did not infringe claim 24. *High Tech Med. Instrumentation v. New Image Ind.*, 49 F.3d 1551 (Fed. Cir. 1995).

During the preliminary injunction proceedings, the District Court found that New Image did not infringe claim 30 and that HTMI's asserted interpretation of opto-electrical componentry "overly stretches the ordinary meaning of the term . . ." App. at 27a.[1] HTMI did not timely appeal the District Court's finding on the interpretation of claim 30.

Approximately one year after the preliminary injunction proceedings, the parties filed cross-motions for summary judgment as to whether the AcuCam camera infringed claim 30. For the second time, the District Court ruled that claim 30 was not infringed. App. at 23a. Specifically, the District Court stated that "HTMI ignores the applicable rules of infringement analysis . . ." App. at 19a, note 7.

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[1] Citations to the Appendix to this Petition are cited as App. at pg. #.

The District Court properly interpreted the claims of the '001 Patent. First, the District Court looked to the intrinsic evidence. The District Court found that the specification provided no notice of any special meaning of the disputed term and that

> [c]ontrary to HTMI's argument, the file history simply does not clearly define the meaning "opto-electrical componentry" in the manner so construed by HTMI.

App. at 18a. The District Court concluded that HTMI's definition was so vague that it would effectively render the term "opto-electrical componentry" meaningless. App. at 19a. None of the intrinsic evidence — the claims, the specification or the file history — provide notice of any special definition for "opto-electrical componentry."

The District Court found the several definitions from technical dictionaries compelling and that the ordinary meaning of "opto-electrical componentry" is a device that converts optical power to electrical signals or electrical signals to optical power, as set forth in technical dictionaries, technical literature and the testimony of one skilled in the art. App. at 18a-19a. In light of the undisputed structure of the AcuCam camera, the District Court concluded that the AcuCam camera does not include "opto-electrical componentry," and therefore, that New Image does not literally infringe claim 30. App. at 23a. The District Court noted that HTMI waived any argument with respect to claiming infringement under the doctrine of equivalents. App. at 23a, note 12.

D. Proceedings Before the Federal Circuit

A divided panel for the Federal Circuit vacated the District Court's holding that New Image did not infringe claim 30 of the '001 Patent on the basis that the District Court erred in interpreting the phrase "opto-electrical componentry" in claim 30.

It is undisputed that the ordinary meaning of the term "opto-electrical componentry" is a transducer. App. at 5a, 6a, 8a. It is also undisputed that "opto-electrical componentry" does not appear anywhere in the written description of the patent. App. at 7a. Nevertheless, the Federal Circuit disregarded the ordinary meaning of "opto-electrical componentry" and substituted a litigation-derived meaning: "electrical components that carry an optical image in an electrical form." App. at 7a-8a. The Federal Circuit's interpretation is not based on the intrinsic evidence or the extrinsic evidence. Rather, the Federal Circuit made the following factual finding:

> Although the term "opto-electrical componentry" does not appear anywhere in the written description, it is **apparent** that the patentee used the term "opto-electrical componentry" to refer to electrical components that carry an optical image in an electrical form.

[Emphasis added]. App. at 7a.

There is no evidence in the record supporting the statement that "opto-electrical componentry" carries an optical image in electrical form. The only place that this definition appears is in arguments presented by patentee's litigation counsel. App. at 6a.

The Federal Circuit also relied on the erroneous factual finding that the "wires are the only structure disclosed that connects the sensor to the cable as required by claim 30." App. at 8a. The language of claim 30 does not require the opto-electrical componentry to ***connect*** the sensor to the cable. Instead, claim 30 recites: "opto-electrical componentry ***extending*** from said sensor through said handpiece to said cable . . ."

REASONS FOR GRANTING THE WRIT

The Court should grant *certiorari* to define the proper role of the Federal Circuit in reviewing a District Court's claim construction and to determine the boundaries of the Federal Circuit's authority in carrying out that role. In the wake of *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995) ("*Markman I*") and *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 116 S. Ct. 1384 (1996) ("*Markman II*") the Federal Circuit hotly debated its proper role in reviewing claim construction. *E.g., Cybor v. FAS Technologies, Inc., and Fastar Ltd.*, __ F.3d __, 46 USPQ 2d 1169, 1998 U.S. App. LEXIS 5908 (Fed. Cir. 1998) (*in banc*). *Markman II* established that claim construction is an issue for determination by the judge; however, the guidance of the Court is necessary to determine the precise role of the appellate court when reviewing a district court's claim construction. Can the Federal Circuit find facts relevant to claim construction? Must the Federal Circuit give deference to a district court's fact findings related to claim construction?

If the Federal Circuit can find facts and give no deference to a district court's fact findings relating to claim construction, then proceedings before a district court are only preliminary and there is no certainty until after an appeal to the Federal Circuit. Under these circumstances the Federal Circuit functions as both trial and appellate courts, operating with only the sterile record on appeal rather than the rich presentations and tutorials available to a district court.

In this case, the disputed claim term had an ordinary meaning known to those skilled in the art. The District Court found that the disputed term should be interpreted in accordance with this ordinary meaning. The Federal Circuit redefined the disputed term by making a factual finding without showing deference to the District Court's factual findings. The basis for the Federal Circuit's factual findings was neither intrinsic nor extrinsic evidence. The Federal Circuit adopted a meaning which appears only in the arguments of

patentee's counsel, *i.e.*, secret information not available to the public.

What really happened in this case is that the patentee made an error in drafting claim 30. The claim recites two transducers, a "sensor" and "opto-electrical componentry." The Federal Circuit set about correcting this error on appeal by redefining the disputed claim term. The Federal Circuit is not the proper forum for correcting claim drafting errors. The Patent Statute has established reissue proceedings before the United States Patent and Trademark Office as the forum for correcting errors in a patent. 35 U.S.C. § 251.

Allowing the Federal Circuit to find facts and/or correct claim errors on appeal violates well-established notice requirements of the Court. The public does not and could not have notice of the litigation-derived meaning. A business person will never have certainty of the meaning of a claim if the Federal Circuit can find facts and/or correct claim drafting errors after the issue of infringement is litigated.[2]

I.

DIFFERENT GROUPS OF JUDGES OF THE FEDERAL CIRCUIT HAVE NOT AGREED ON THE PROPER ROLE FOR APPELLATE REVIEW OF A DISTRICT COURT'S CLAIM CONSTRUCTION.

After the Court's decision in *Markman II*, it is clear that the judge, and not the jury, is to construe patent claims. However, the judges of the Federal Circuit have not been able to agree on whether

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[2] This problem is real. New Image was acquired by Dentsply International Inc. after the District Court found that claim 30 was not infringed but before the Federal Circuit improperly changed the meaning of opto-electrical componentry. Now, HTMI is claiming damages in an amount which exceeds the purchase price paid by Dentsply to acquire New Image.

the Federal Circuit can find facts and must show deference to a district court's findings when reviewing a district court's claim construction. One group of judges believes that the district court is owed no deference on any findings relating to claim interpretation. *Cybor*, __ F.3d at __ 46 U.S.P.Q. 2d at 1171-79. Other judges of the Federal Circuit believe that the Court in *Markman II* stopped short of authorizing the Federal Circuit to find facts *de novo* when evidentiary disputes exist as part of the construction of a patent claim. *Cybor*, __ F.3d at __, 46 U.S.P.Q. 2d at 1179-97 (concurring opinions, dissenting opinions, and additional views); *See also Fromson v. Anitec Printing Plates, Inc.*, 132 F.3d 1437 (Fed. Cir. 1997); *Eastman Kodak Co. v. Goodyear Tire & Rubber Co.*, 114 F.3d 1547, 1555-56 (Fed. Cir. 1997); *Serrano v. Telular Corp.*, 111 F.3d 1578, 1586 (Fed. Cir. 1997) (Mayer, J., concurring); *Metaullics Sys. Co. v. Cooper*, 100 F.3d 938, 939 (Fed. Cir. 1996).

Claim interpretation involves weighing some facts. *See Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998) ("It is the person of ordinary skill in the field of the invention through whose eyes the claims are construed."). The Court's precedent is clear: a court of appeals may not independently review the facts and reverse a finding by a trial court "because it is convinced that it would have decided the case differently." *Anderson v. City of Bessmer City, N.C.*, 470 U.S. 564, 574, 105 S. Ct. 1504, 1571 (1985); Fed. R. Civ. P. 52(a) ("Findings of fact, whether based on oral or documentary evidence, shall not be set aside unless clearly erroneous . . .").

The center of the Federal Circuit's debate is the ruling of the Court in *Markman II*. In *Markman I*, the Federal Circuit reasoned that claim construction is a matter of law subject to plenary appellate review. The Court agreed with the Federal Circuit that the question of claim construction is to be decided by the judge, rather than the jury. However, the Court repeatedly intimated that claim construction is not a purely legal matter. *See, e.g., Markman II*, 517 U.S. at __, 116 S. Ct. at 1390 (calling the construction of a term of art following receipt of evidence a "mongrel practice"); *Id.*

at 1395 (suggesting that claim interpretation "falls somewhere between a pristine legal standard and a simple historical fact" (*quoting Miller v. Fenton*, 474 U.S. 104, 114 (1985))); *Id.* at 1396 ("notwithstanding [claim construction's] evidentiary underpinnings").

In the time since *Markman II*, the Federal Circuit has stated that it has the authority to "review the issue of claim interpretation independently without deference to the trial judge." *E.g., Exxon Chem. Patents, Inc. v. Lubrizol Corp.*, 64 F.3d 1553, 1556 (Fed. Cir. 1995). Indeed, one case has gone so far as to claim that the law allows "independent determination of the construction of the claims, as a matter of law, **unencumbered by the trial process**." [emphasis added] *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 72 F.3d 857, 863 (Fed. Cir. 1995), *vacated and remanded on other grounds,* 117 S. Ct. 1240 (1997).

Such views have been criticized, even within the Federal Circuit.

> If claim construction is only a question of law to be reviewed by [the Federal Circuit] *de novo*, then the absence of review as a matter of right over *our* claim constructions, which may be new and unsupported by legal analysis, or may never have been tested by the adversarial process, would transform [the Federal Circuit] into a trial court of first and usually last resort.

Cybor Corp., __ F.3d at __ , 46 U.S.P.Q. 2d at 1183 (Mayer, C.J., concurring)

II.

ALLOWING THE FEDERAL CIRCUIT TO FIND FACTS VIOLATES THE WELL-ESTABLISHED NOTICE REQUIREMENTS OF PATENT LAW.

The Patent Statute, prior decisions of the Court, and prior decisions of the Federal Circuit require the patentee to give notice to the public of the metes and bounds of the claimed invention. The Court has recognized that the Patent Laws require a patentee to draft patent claims in a precise manner in order to provide notice to the public of the exact scope of the legal protection provided by the patent.[3] This notice requirement is codified in the second paragraph of 35 U.S.C. § 112 which requires that the "specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." The Court has repeatedly made clear that the fundamental importance and purpose of a precise definition of the protected claim is a requirement of the patent law that long predates the enactment of 35 U.S.C. § 112. *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 236, 63 S. Ct. 165, 170 (1942) ("The statutory requirement of particularity and distinctness in claims is met only when they . . . clearly circumscribe what is foreclosed from future enterprise."); *Permutit Co. v. Graver Corp.*, 284 U.S. 52, 60, 52 S. Ct. 53, 55 (1931) ("The statute requires the patentee . . . to inform the public during the life of the patent of the limits of the monopoly asserted, so that it may be known which features may be safely used or manufactured without a license and which may not.").

The purpose of the notice requirement is to allow the public to know what it can and cannot do so that both the public and the

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[3] *See Warner-Jenkinson Co. v. Hilton Davis Chemical*, __ U.S. __, __, 117 S. Ct. 1040, 1049 (1997) ("There can be no denying that the doctrine of equivalents, when applied broadly, conflicts with the definitional and public-notice functions of the statuory claiming requirement.").

inventors may benefit from the patent laws. For example, in *Universal Oil Products Co. v. Globe Oil and Refining Co.*, 322 U.S. 471, 484, 64 S. Ct. 1110, 1116 (1944), the Court stated that:

> As a reward for inventions and to encourage their disclosure, the United States offers a seventeen year monopoly to an inventor who refrains from keeping his invention a trade secret. But the *quid pro quo* is disclosure of a process or device in sufficient detail to enable one skilled in the art to practice the invention once the period of the monopoly has expired; and the same precision of disclosure is likewise essential to warn the industry concerned of the precise scope of the monopoly asserted.

The limits of the patent must be known

> for the protection of the patentee, the encouragement of the inventive genius of others and the assurance that the subject of the patent will be dedicated ultimately to the public.

General Elec. Co. v. Wabash Appliance Corp., 304 U.S. 364, 369, 58 S. Ct. 899, 902 (1938). Otherwise, a

> zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims would discourage invention only a little less than unequivocal foreclosure of the field,

United Carbon, 317 U.S. at 236, 63 S. Ct. at 170, and "[t]he public [would] be deprived of rights supposed to belong to it, without being clearly told what it is that limits these rights." *Merrill v. Yeomans*, 94 U.S. 568, 573 (1877) (cited and quoted in *Markman II*).

The notice requirements discussed above are violated if the Federal Circuit can find facts and can use these findings to reinterpret

previously construed claim language. Whether the Federal Circuit can find facts

> influences greatly both the trial judges who preside over the trial process and patent practitioners who must advise clients to accommodate their business plans to an uncertain legal regime.

Cybor, __ F.3d at __, 46 U.S.P.Q. 2d at 1190 (Rader, J., dissenting).

III.

THE EVIDENCE OF RECORD DOES NOT PROVIDE THE PUBLIC WITH NOTICE OF THE INTERPRETATION OF "OPTO-ELECTRICAL COMPONENTRY" ADOPTED BY THE FEDERAL CIRCUIT.

In determining the proper construction of a claim, a court should first look to the intrinsic evidence, including the claims, the specification and the prosecution history. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). If intrinsic evidence is insufficient to enable a court to determine the meaning of the asserted claims, extrinsic evidence may also properly be relied on to understand the technology and to construe the claims. *Id.*, at 1584.

The words in a claim are given their ordinary meaning, unless they are defined otherwise. *ZMI Corp. v. Cardiac Resuscitator Corp.*, 844 F.2d 1576 (Fed. Cir. 1988). The claims, specification and file history of the '001 Patent provide no indication that the inventors intended a special meaning for the phrase "opto-electrical componentry." Thus, the District Court properly used extrinsic evidence to ascertain the ordinary meaning of the disputed term.

A. The Ordinary Meaning of "Opto-Electrical Componentry" — and the Only Meaning Supported by the Evidence — Is a Transducer

The District Court based the construction of claim 30 on the ordinary meaning of "opto-electrical componentry" which was established by four separate technical dictionary definitions, as well as technical literature and testimony of an independent designer in the field of endoscopes. Technical dictionaries and technical literature, such as those relied on by the District Court, are considered more reliable than other sources of extrinsic evidence. *Vitronics*, 90 F.3d at 1585. The Federal Circuit has approved the use of dictionary definitions to determine the ordinary meaning when the specification and file history provide no clear indication that the inventor intended a meaning contrary to the ordinary meaning. *See, e.g., Quantum Corp. v. Rodime PLC*, 65 F.3d 1577, 1581 (Fed. Cir. 1995).

Using technical dictionaries, the District Court correctly found that the ordinary meaning of the phrase "opto-electrical componentry" is a device that converts optical power (photons) to electrical signals (electrons) or which converts electrical signals (electrons) to optical power (photons) — a transducer. The following dictionary definitions provided the basis for the District Court's interpretation of "opto-electrical componentry":

The PHOTONICS DICTIONARY D-94 (1991) defines "optoelectronic" as:

> Pertaining to a device that responds to optical power, emits or modifies optical radiation, or utilizes optical radiation for its internal operation. Any device that functions as an electrical to optical or optical to electrical transducer . . .

THE NEW IEEE STANDARD DICTIONARY OF ELECTRICAL AND ELECTRONICS TERMS 894 (5th Ed. 1993) defines "optoelectronic" as:

> Pertaining to a device that responds to optical power, emits or modifies optical radiation, or utilizes optical radiation for its internal operation. Any device that functions as an electrical-to-optical or optical-to-electrical transducer.

The IBM DICTIONARY OF COMPUTING (10th Ed. August 1993) defines "opto-electronic" as:

> (1) Pertaining to a device that responds to optical power, emits or modifies optical radiation, or uses optical radiation for its internal operation. (2) Any device that functions as an electrical-to-optical or optical-to-electrical transducer.

The MCGRAW-HILL DICTIONARY OF ELECTRICAL AND ELECTRONIC ENGINEERING 305 (3d. Ed. 1984) defines "optoelectronics" as:

> The branch of electronics that deals with solid state and other electronic devices for generating, modulating, transmitting, and sensing electromagnetic radiation in the ultraviolet, visible light, and infrared portions of the spectrum.

The ordinary meaning of "opto-electrical componentry" is corroborated in a technical article — Hugo Vifian, *From Microwaves To Lightwaves*, MICROWAVE JOURNAL, Dec. 1992, Vol. 35, No. 12, Page 58 (the "Vifian Article"). The Vifian Article defines "opto-electrical components" to be components having an optical input and an electrical output:

> The final group is the opto-electrical components. This group includes lightwave detectors or receivers, and demodulator sensors. These components have optical input and electrical output ports, and are O/E components.

The ordinary meaning of "opto-electrical componentry" adopted by the District Court is further substantiated by the testimony of Dominick Danna, a third party electrical engineer who has received various awards for his work in the area of endoscopes. In response to examination by HTMI's counsel, Mr. Danna (who is not affiliated with either party to this litigation) testified during deposition that opto-electronic is, "an adjective that — relates or can be used I suppose as a noun that relates to devices that turn photoelec-photoenergy into electronic signals."[4] Mr. Danna's testimony and the Vifian Article are relevant to how the disputed term is understood in the relevant technical field. *Hoechst Celanese Corp. v. BP Chemicals Ltd.*, 78 F.3d 1575, 1580 (Fed Cir. 1996).

B. The Intrinsic Evidence Does Not Provide Notice that the Inventors Intended a Special Meaning for "Opto-Electrical Componentry"

A patentee is free to be his own lexicographer. *Markman I*, 52 F.3d at 980. "The caveat is that any special definition given to a word must be clearly defined in the specification." *Id.*

The '001 Patent does not define "opto-electrical componentry" either explicitly or implicitly. These words do not appear in the specification. These words do not appear in the claims as originally filed or in the prosecution history of the '001 Patent. The phrase "opto-electrical componentry" first appeared in claim 30 during the reexamination proceedings. There is no indication that the inventors of the '001 Patent intended that "opto-electrical componentry" refer to a wire or something which transmits electrical signals representing the optical image. The Federal Circuit cannot now impose such a secretly-held meaning. *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1388 (Fed. Cir. 1992).

Nothing in the language of the issued claims supports or explains the Federal Circuit's statement that the "opto-electrical

[4] Mr. Danna's testimony appears at page 239 of the Appendix at the Federal Circuit.

componentry" must be electrical connections which convey the optical information in electrical form. The Federal Circuit is alleging that anything can be "opto-electrical componentry" as long as it is connected from the sensor to the cable. When presented with the same argument, the District Court found that such reasoning bases the meaning entirely on the language "extending" and not on the functional language "opto-electrical componentry." App. at 19a. Such an interpretation renders the term "opto-electrical componentry" meaningless. *Id.* A construction which gives no meaning to the words "opto-electrical componentry" is improper. *Exxon Chemical Patents*, 64 F.3d at 1557 ("We must give meaning to all the words in Exxon's claims.").

IV.

THE FEDERAL CIRCUIT MADE SEVERAL ERRONEOUS FACT FINDINGS WHEN INTERPRETING THE '001 PATENT.

A. The Federal Circuit Found a Meaning for "Opto-Electrical Componentry" That Is Unsupported by the Evidence

The Federal Circuit made an erroneous factual finding when it stated that:

> [a]lthough the term "opto-electrical componentry" does not appear anywhere in the written description, it is apparent that the patentee used the term "opto-electrical componentry" to refer to electrical components that carry an optical image in an electrical form.

App. at 7a. The Federal Circuit made a factual finding that the stated meaning is "apparent." There are no facts cited in support of that finding. Indeed, there are no facts supporting that finding.

B. The Federal Circuit Misread the '001 Patent

The interpretation asserted by the Federal Circuit is based, in part, on the finding that the "wires are the only structure disclosed that connects the sensor to the cable as required by claim 30." App. at 8a. However, the language of claim 30 does not require the opto-electrical componentry to ***connect*** the sensor to the cable. Claim 30 recites "opto-electrical componentry ***extending*** from said sensor through said handpiece to said cable. . ." '001 Patent, Col. 3, lines 3-4. [Emphasis added]. Thus, the Federal Circuit's finding that the wires are the only structure disclosed that connects the sensor to the cable as required by claim 30 is flawed because claim 30 does not require such a connection.

C. The Holding of the Court of Appeals Contradicts Itself — The Construction Adopted by the Federal Circuit Does Not Read on the Disclosed Embodiments

The Federal Circuit adopted a construction other than the ordinary meaning because the Federal Circuit asserted that the ordinary meaning "would not cover any of the disclosed embodiments." App. at 8a. However, the construction of "opto-electrical componentry" adopted by the Federal Circuit ***also*** results in a reading of claim 30 which does not cover any of the disclosed embodiments. A claim interpretation that does not cover a disclosed embodiment is rarely, if ever, correct. *Vitronics*, 90 F.3d at 1583; *Hoechest Celanese*, 78 F.3d at 1581; *Modine Mfg. Co. v. United States Int'l Trade Comm'n*, 75 F.3d 1545, 1550 (Fed. Cir. 1996).

The Federal Circuit concluded that

> a person skilled in the art reading the patent document would understand that the term "opto-electrical componentry" referred to the indicated wires.

App. at 8a. This interpretation of "opto-electrical componentry" prevents the sensor element of claim 30 from reading on the disclosed embodiment. Claim 30 recites "said sensor being coupled to . . . said flexible cable . . ." Using the Federal Circuit's interpretation of "opto-electrical componentry," the disclosed embodiment does not show the sensor (camera 56) "coupled to . . . said flexible cable" (cable 16). Instead, the '001 Patent shows the sensor connected to the opto-electrical componentry (wire 64) and the opto-electrical componentry connected to the image processing system 14 rather than to the flexible cable 16.

> Camera 56 will have connected to it a number of lead wires 64 which travel through hollow regions 62 and 48, exit handpiece 12, and are ultimately connected to an image processing system 14.

'001 Patent, Col. 6, lines 6-10.

Claim 30 requires the sensor to be coupled to the cable. The specification shows the sensor connected to the opto-electrical componentry (as defined by the Federal Circuit) but does not show the sensor connected to the cable. Thus, claim 30, as interpreted by the Federal Circuit, does not read on the disclosed embodiments.

V.

THE FEDERAL CIRCUIT IS NOT THE PROPER FORUM FOR CORRECTING ERRORS IN A PATENT.

The reason for the confusion among the parties and the courts as to the meaning of "opto-electrical componentry" is that the claim is ambiguous and the written description does not provide proper support for the claim language. HTMI is responsible for drafting claim 30; therefore, it is HTMI who should suffer for the mistakes made in the patent. If HTMI wishes to correct its mistake, it should do so at the Patent Office. The Federal Circuit is not the proper forum for correcting errors in a patent.

> It would not be appropriate for us now to interpret the claim differently just to cure a drafting error made by [the patentee]. That would unduly interfere with the function of claims in putting competitors on notice of the scope of the claimed invention.

Hoganas AB v. Dresser Indus., Inc., 9 F.3d 948, 951 (Fed. Cir. 1993).

Congress has provided that errors in a patent should be corrected by reissue proceedings before the United States Patent and Trademark Office. 35 U.S.C. § 251. The Court has recognized that it is reissue proceedings, and not the Federal Circuit, that can fix errors in the patent:

> If the patentees have not claimed the whole of their invention, and the omission has been the result of inadvertence, they should have sought to correct the error by a surrender of their patent, and then an application for a reissue.
>
> * * *
>
> But the Courts have no right to enlarge a patent beyond the scope of its claim as allowed by the patent-office, or the appellate tribunal to which the contested applications are referred.

McClain v. Ortmayer, 141 U.S. 419, 424, 12 S. Ct. 76, 77 (1891); *see also Merrill*, 94 U.S. at 573 ("If the patentee is also entitled to a patent for the product of this distillation, and has failed, as we think he has, to obtain it, the law affords him a remedy, by a surrender and reissue.").

CONCLUSION

Accordingly, New Image respectfully requests that its petition for writ of *certiorari* be granted.

Respectfully submitted,

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APPENDIX A — DECISION OF THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT DECIDED DECEMBER 24, 1997

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

97-1173

HIGH TECH MEDICAL INSTRUMENTATION, INC.,

Plaintiff-Appellant,

v.

NEW IMAGE INDUSTRIES, INC.,

Defendant-Appellee,

and

PERRY MICHAEL WILLIAMS and ACUIMAGE CORPORATION,

Defendants.

DECIDED: December 24, 1997

Before MAYER, SCHALL, and BRYSON, *Circuit Judges*.

Opinion for the court filed by *Circuit Judge* SCHALL. *Circuit Judge* MAYER dissents. SCHALL, *Circuit Judge*.

Appendix A

DECISION

In this patent infringement action, High Tech Medical Instrumentation, Inc. (HTMI) appeals the decision of the United States District Court for the Northern District of California granting the motion of New Image Industries, Inc. (New Image) for partial summary judgment of non-infringement. *High Med. Instrumentation. Inc. v. New Image Indus., Inc.*, No. C-93-4152, 1995 WL 381502 (N.D. Cal. May 25, 1995). On cross-motions for summary judgment, the district court held that New Image did not infringe claim 30 of HTMl's reexamined U.S. Patent No. B1 4,858,001 (the '001 patent). Because the district court erred in its claim construction, we *vacate* and *remand*.

DISCUSSION

I.

HTMI is the assignee of all rights to the '001 patent, which discloses a hand-held dental endoscope. A dental endoscope is a visual imaging device used by dentists to observe difficult-to-view areas of the mouth. The endoscope consists of a small sensor, such as a video camera, mounted in a thin tube-shaped structure. The structure can be placed inside a patient's mouth so that a dentist can obtain an electronic image of any area of the mouth. The image then can be displayed on a video monitor in the dentist's office or stored in electronic form for later use.

At one end of the hand-held device is a removable objective element containing a combination of optical elements. The objective element can be removed and replaced with another objective element containing different optical components. The

sensor, such as a charge-coupled device (CCD), is located in the camera-carrying section of the tube-shaped structure. The sensor converts the image received from the optical components into an electrical signal, which then is transmitted by wires through the handpiece to an external cable. The cable, in turn, is connected to a video system which can display or record the images received by the sensor.

When the '001 patent originally issued on August 15, 1989, it contained nineteen claims. In 1990, the patent was reexamined, and Reexamination Certificate No. B1 4,858,001 was issued on June 30, 1992. The reexamined patent contained amended claims 1 through 13 and new claims 20 through 41. Claims 14 through 19 were canceled.

On November 23, 1993, HTMI brought the present infringement action, alleging that New Image's AcuCam product infringed independent claims 24 and 30, and dependent claim 31 of the '001 patent.[1] In due course, the district court granted a preliminary injunction enjoining the further sale of the AcuCam, on the ground that HTMI had demonstrated a likelihood of success on the merits with respect to infringement of claim 24. The court, however, declined to grant a preliminary injunction with respect to infringement of claim 30.

In *High Tech Medical Instrumentation. Inc. v. New Image Industries, Inc.*, 49 F.3d 1551, 1556, 33 USPQ2d 2005, 2009 (Fed. Cir. 1995), we reversed the district court's grant of the preliminary injunction and held that HTMI had not shown a likelihood of success with respect to infringement of claim 24.

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1. The other parties to the infringement action, Mr. Perry Michael Williams and AcuImage Corporation, are not involved in this appeal.

In addition, we declined to consider HTMI's argument that the district court had erred in not granting a preliminary injunction with respect to claim 30. We did so because HTMI had not cross-appealed from the portion of the district court's order that denied a preliminary injunction against infringement of claim 30. *Id.* at 1557-58, 33 USPQ2d at 2010. Subsequent to our decision, New Image moved for summary judgment of non-infringement of independent claim 30 and dependent claim 32, while HTMI moved for summary judgment of infringement of claim 30.[2]

Claim 30 of the '001 patent (with the disputed claim language emphasized) reads as follows:

> A dental endoscopic apparatus comprising:
>
> a rigid elongated handpiece having a proximal end and a distal end;
>
> a flexible cable having one end coupled to said proximal end and another end adapted for coupling to video imaging equipment;
>
> a housing removably coupled to said distal end of said rigid elongated handpiece;
>
> a sensor for sensing an image of a selected target,

2. We note that although the district court granted New Image's motion for summary judgment with respect to claims 30 and 32, HTMI states that it has not asserted claim 32 against New Image's AcuCam. We need not resolve this confusion here, but simply note that our analysis below with respect to claim 30 also applies to claim 32.

said sensor being coupled to said rigid elongated handpiece and said flexible cable, said sensor extending into said housing;

opto-electrical componentry extending from said sensor through said handpiece to said cable; and

an objective element positioned in said housing and arranged to focus an image of a selected target upon said sensor when said housing is coupled to said rigid elongated handpiece.

The district court construed the term "opto-electrical componentry" to mean "an optical-to-electrical or an electrical-to-optical transducer." *High Tech*, 1995 WL 381502, at *6. The court then determined that the AcuCam device did not meet the limitation of "opto-electrical componentry extending from said sensor through said handpiece to said cable" because it did not contain a transducer connecting the CCD sensor to the cable. *See id.* The court therefore granted New Image's motion for partial summary judgment. The district court did not construe any of the other limitations in claim 30.

II.

We review a district court's grant of summary judgment *de nova. See Athletic Alternatives. Inc. v. Prince Mfg., Inc.*, 73 F.3d 1573, 1578, 37 USPQ2d 1365, 1369-70 (Fed. Cir. 1996). Claim construction is a matter of law which we also review *de nova. See Markman v. Westview Instruments. Inc.*, 52 F.3d 967, 979, 34 USPQ2d 1321, 1329 (Fed. Cir. 1995) (in banc), *aff'd*, 116 S. Ct. 1384, 38 USPQ2d 1461 (1996).

Appendix A

On appeal, HTMI argues that the district court erred in construing the term "opto-electrical componentry." HTMI contends that the term should be construed to mean an electrical component that conveys optical images in an electrical form. HTMI also argues that we should construe on appeal other claim terms such as "objective element" and "housing," which the district court did not address. In light of its proposed claim construction, HTMI urges us to hold that the AcuCam device infringes claim 30 of the '001 patent.

When interpreting a claim, the court should look first to intrinsic evidence: the claim itself, the specification, and the prosecution history. *See Vitronics Corp. v. Conceptronic. Inc.*, 90 F.3d 1576, 1581, 39 USPQ2d 1573,1576 (Fed. Cir. 1996). If an ambiguity remains after considering intrinsic evidence, then the court may refer to extrinsic evidence, such as expert and inventor testimony. *Id.* at 1584, 39 USPQ2d at 1577. In addition, although technically considered extrinsic evidence, the court is free to consult technical dictionaries at any time in order to determine the ordinary meaning of claim terms. *Id.* at 1584 n.6, 39 USPQ2d at 1578 n.3.

In construing the term "opto-electrical componentry," the district court concluded that neither the claims, the specification, nor the prosecution history provided clear guidance for defining the term. Accordingly, the court looked to various dictionaries and technical articles, and to expert testimony for the ordinary meaning of the term. As noted, the court concluded that the ordinary meaning of the term "opto-electrical componentry" was an "optical-to-electrical or an electrical-to-optical transducer," and it adopted this meaning in its claim construction. The court then determined that the only component in the AcuCam device which had an opto-electrical

function was the CCD camera, which corresponded to the "sensor" in claim 30. The court found that the components connecting the CCD sensor to the cable in the AcuCam device were resistors, capacitors, logic gates, transistors, diodes, voltage regulators, and wires. The court further found that none of these components were "opto-electrical" within the ordinary meaning of the term. The court therefore concluded that the AcuCam device did not possess "opto-electric [sic] componentry extending from said sensor through said handpiece to said cable," as recited in Claim 30. *High Tech*, 1995 WL 381502, at *6.

When construing a patent claim, terms should generally be given their ordinary and customary meaning. *See Vitronics*, 90 F.3d at 1581, 39 USPQ2d at 1576. However, we have stated that: "[a] technical term used in a patent document is interpreted as having the meaning that it would be given by persons experienced in the field of the invention, *unless* it is apparent from the patent and the prosecution history that the inventor used the term with a different meaning." *Hoescht Celanese Corp. v. BP Chem. Ltd.*, 78 F.3d 1575, 1578, 38 USPQ2d 1126, 1129 (Fed. Cir.) (emphasis added), *cert. denied*, 117 S. Ct. 275 (1996). We also have stated that courts may refer to technical dictionaries in construing claims, as the district court did in this case, "so long as the dictionary definition does not contradict any definition found in or *ascertained by a reading of the patent documents*." *Vitronics*, 90 F.3d at 1584 n.6, 39 USPQ2d at 1578 n.3 (emphasis added). Although the term "opto-electrical componentry" does not appear anywhere in the written description, it is apparent that the patentee used the term "opto-electrical componentry" to refer to electrical components that carry an optical image in an electrical form. The written description states: "Camera 56 will have connected to it a number of lead wires 64 which travel through hollow regions 62 and

48, exit handpiece 12, and are ultimately connected to an image processing system 14." '001 patent, col. 6,11. 6-10. These wires are the only structure disclosed that connects the sensor to the cable as required by claim 30 ("opto-electrical componentry extending from said sensor through said handpiece to said cable"). We therefore conclude that a person skilled in the art reading the patent document would understand that the term "opto-electrical componentry" referred to the indicated wires.

It also should be noted, we believe, that the claim construction we have adopted is appropriate because the ordinary meaning of the term "opto-electrical componentry" would not cover any of the disclosed embodiments of the invention claimed in the '001 patent. The Supreme Court has stated that the terms in a claim must be defined in a manner that fully comports with the instrument as a whole and that preserves the patent's internal coherence. *See Markman v. Westview Instruments. Inc.*, 116 S. Ct. 1384, 1395, 38 USPQ2d 1461, 1470 (1996). Furthermore, a claim interpretation that does not cover a disclosed embodiment is "rarely, if ever, correct." Vitronics, 90 F.3d at 1583, 39 USPQ2d at 1578; *see also Hoechst*, 78 F.3d at 1581, 38 USPQ2d at 1130 ("it is unlikely that an inventor would define the invention in a way that excluded the preferred embodiment"); *Modine Mfg. Co. v. United States Int'l Trade Comm'n*, 75 F.3d 1545, 1550, 37 USPQ2d 1609, 1612 (Fed. Cir.) ("a claim interpretation that would exclude the inventor's device is rarely the correct interpretation"), *cert. denied*, 116 S. Ct. 2523 (1996). The ordinary meaning of "opto-electrical componentry," which forms the basis for the district court's claim construction, would require the presence of a second transducer in the device. However, there is no support for a second transducer in the specification or in the prosecution history because the only transducer described in the specification is the CCD camera.

For the foregoing reasons, we conclude that the term "opto-electrical componentry," as used in Claim 30, means electrical components that convey optical images in an electrical form. However, we are not prepared on the basis of the record before us to say that the AcuCam device contains "opto-electrical componentry extending from said sensor through said handpiece to said cable." We believe that the district court should make the appropriate factual determination as to whether this limitation of claim 30 is met in the accused device. In addition, we leave construction of the terms "objective element" and "housing" and determination of whether these limitations of claim 30 are met in the accused device to the district court in the first instance.

The decision of the district court is vacated, and the case is remanded for further proceedings consistent with this opinion.

Each party shall bear its own costs.

MAYER, *Circuit Judge,* dissents.

APPENDIX B — ORDER OF THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA FILED MAY 25, 1995

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

No. C 93-4152 SBA (ARB)

HIGH TECH MEDIAL INSTRUMENTATION, INC., A Corporation,

Plaintiff,

v.

NEW IMAGE INDUSTRIES, INC., A Corporation

Defendant.

ORDER GRANTING NEW IMAGE'S MOTION AND DENYING HTMI'S CROSS-MOTION FOR PARTIAL SUMMARY JUDGMENT

This is a patent infringement action brought by plaintiff High Tech Medical Instrumentation ("HTMI") against defendant New Image Industries, Inc., ("New Image"). HTMI is the current holder of United States Patent No. B1 4,858,001 ("the '001 patent") which encompasses the technology for the manufacture of an intraoral camera used in dental procedures. HTMI alleges that New Image has infringed the '001 patent by manufacturing and selling an intraoral camera known as the "AcuCam." Specifically, HTMI claims that New Image's "AcuCam" infringes Claims 24, 30 and 31 of the '001 patent.

Appendix B

Presently before the Court are defendant's motion for partial summary judgment and plaintiff's cross-motion for summary judgment with respect to independent Claim 30 and dependent Claim 32 of the '001 patent. Having read and considered the papers and exhibits submitted in connection with these motions, the Court grants defendant's motion and denies plaintiff's motion.[1]

BACKGROUND

HTMI was assigned the rights to United States letters patent no. 4,858,001, issued August 15, 1989, relating to an intraoral endoscopic device.[2] As originally issued, the '001 patent contained nineteen claims. The original '001 patent was reexamined, and on June 30, 1992, a reexamination certificate numbered, B1 4,858,001 was issued.[3] The reexamined '001 patent contains amended Claims 1 through 13 and new Claims 20 through 41. Claims 14 through 19 were cancelled.

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1. On May 2, 1995, two weeks after New Image filed its combined reply brief and opposition to HMTI's cross-motion, HTMI filed a brief styled as a Reply in Support of Cross-Motion for Partial Summary Judgment of Infringement along with supporting documents. This brief, which is essentially an surreply, is *not* authorized under the Local Rules and was filed *without* prior leave of the Court. L.R. 220-6. As such, the Court orders this brief *stricken* from the record.

2. An endoscope is a device which facilitates viewing objects in areas not readily accessible. A dental endoscope is essentially a hand-held, tubular-shaped apparatus which contains a camera which allows a dentist to explore difficult to view areas of a patient's mouth.

3. For purposes of this Order, the '001 patent refers to the reexamined '001 patent.

Appendix B

In 1988, Perry Michael Williams, a co-inventor of the original '001 patent, left HTMI and formed a competing corporation, AcuImage, Inc. ("AcuImage"). While at AcuImage, he designed and produced an intraoral endoscope (camera) called the "AcuCam." In January, 1991, defendant New Image purchased the assets of AcuImage, including the business of manufacturing and selling the AcuCam.

The AcuCam works essentially in the following manner. The basic element of the camera is the charge-coupled device ("CCD") assembly. The CCD assembly consists of the CCD, a mini-circuit board, a flexible circuit and a connector. Light from the camera lense hits the CCD. The CCD converts light energy (photons) into electrical energy (electrons). The electrical signal is transmitted through the flexible circuit to the connector. From the connector, the signal is sent through a cable to a processor located in a floorstanding cabinet. The processor converts the electrical signal into a video image which is then transmitted to a video monitor for viewing.

On November 23, 1993, HTMI commenced the instant action against New Image alleging that the AcuCam infringed the reexamined '001 patent. After entertaining briefing and oral argument, the Court entered a preliminary injunction enjoining the further sale of the AcuCam. Although the Court found that HTMI had demonstrated a likelihood of success based on the infringement of Claim 24, the Court made a contrary finding with respect to Claim 30.

Claim 30 recites a dental endoscopic device comprising six separate elements:

> (1) a rigid elongated handpiece having a proximal end and a distal end;

(2) a flexible cable having one end coupled to said proximal end and another end adapted for coupling to video imaging equipment;

(3) a housing removably coupled to said distal end of said rigid elongated handpiece;

(4) a sensor for sensing an image of a selected target, said sensor being coupled to said rigid elongated handpiece and said flexible cable, said sensor extending into said housing;

(5) *opto-electric componentry extending from said sensor through said handpiece to said cable;* and

(6) an objective element positioned in said housing and arranged to focus an image of a selected target upon said sensor when said housing is coupled to said rigid elongated handpiece.

The parties are now before the Court on cross-motions for partial summary judgment as to Claim 30, along with Claim 32, which is based on Claim 30. The salient issue presented by the parties' motions is whether the AcuCam contains "opto-electric componentry extending from said sensor through said handpiece to said cable," as stated in Claim 30. The Court discusses this matter below.[4]

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4. Because the Court concludes that the AcuCam lacks the limitation regarding opto-electric componentry, the Court does not reach the issue of whether the AcuCam contains a "housing" as specified in Claim 30.

Appendix B

DISCUSSION

A. Legal Standard

Under Federal Rule of Civil Procedure 56, a court may properly grant a motion for summary judgment if the pleadings and materials demonstrate that there is "no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of law." *Celotex Corp. v. Catrett,* 477 U.S. 317, 322 (1986). A dispute about a material fact is genuine "if the evidence is such that a reasonable jury could return a verdict for the nonmoving party." *Anderson v. Liberty Lobby Inc.,* 477 U.S. 242, 248 (1986). A court may grant a summary judgment motion in a patent infringement case, as in any other case. *Avia Group Int'l Inc. v. L.A. Gear Cal. Inc.,* 853 F.2d 1557, 1561 (Fed. Cir. 1388).

There is a two-step analytical process to determine whether an accused device literally infringes on an existing patent. First, the Court must construe or interpret the scope of the patent claims; this determination is a matter of law. *Markman v. Westview Instruments Inc.,* __ F.3d __, 1995 WL 146983 at *11 (Fed. Cir., filed April 5, 1995). Second, the Court must then determine "whether the properly interpreted claims encompass" the accused product. *ZMI Corp. v. Cardiac Resuscitator Corp.,* 844 F.2d 1576, 1579 (Fed. Cir. 1988).

The patent owner bears the burden of proving infringement. *See Wilson Sporting Goods Co. v. David Geoffrey & Assocs.,* 904 F.2d 677, 685 (Fed. Cir.), *cert. denied,* 498 U.S. 992 (1990). "To establish infringement of a patent, *every limitation* set forth in a claim must be found in an accused product . . . exactly or by substantial equivalent." *Johnston v. IVAC Corp.,*

885 F.2d 1574, 1577 (Fed. Cir. 1989) (emphasis added). If even a single element is missing from the accused product, there can be no infringement. *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1539 (Fed. Cir. 1991). "[W]here the patentee's proof is deficient in meeting an essential part of the legal standard for infringement," summary judgment on the ground of non-infringement is proper. *Johnston*, 885 F.2d at 1577.

B. New Image's Definition of Opto-Electric Componentry is Correct

1. Overview of The Parties' Respective Positions

The threshold issue presented by the parties' motions is the proper construction of "opto-electric componentry extending from said sensor through said handpiece to said cable," as recited in Claim 30 of the '001 patent.

New Image argues that because the '001 patent and its prosecution history are silent as to the meaning of "opto-electric componentry," the Court should employ the ordinary meaning of the term as it is used by those persons skilled in the art. The ordinary meaning of "opto-electric componentry," argues New Image, is a device which converts optical power (photons) to electrical signals (electrons) or vice versa. In contrast, HTMI asserts that any wiring or circuitry between the sensor and the cables constitutes the opto-electric componentry. (Pl.'s Opp'n at 11.)

2. The Specification Provides No Guidance on the Meaning of Opto-Electric Componentry

In construing the meaning of a patent claim, the court

should consider the claim itself, the specification, and the prosecution history. *Markham,* 1995 WL 146983 at *11. The Court, in its discretion, may also consider extrinsic evidence including "all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Id.* However, "[e]xtrinsic evidence is to be used for the court's understanding of the patent, not for the purpose of varying or contradicting the terms of the claims." *Id.*

In the instant case, HTMI asserts that the *specification* of the '001 patent demonstrates that the term "opto-electrical componentry" should necessarily be equated with the interconnections between the sensor and the cable. (Pl.'s Opp'n at 11.) HTMI contends that this fact is "obvious" from the drawings and supported by the deposition testimony of New Image's own expert, Robert Fischer. These contentions are without merit.

First, the mere reference to drawings in the '001 patent is insufficient to construe the meaning of "opto-electric componentry." As the Federal Circuit explained in *Markham*, "any special definition given to a word *must be clearly defined* in the specification." 1995 WL 146983 at *11 (emphasis added). Even assuming that the definition ascribed by HTMI is present in the specification, such meaning is far from "clearly defined." *Id.* In short, the conclusion advocated by HTMI is not "obvious" to the Court.

Second, HTMI misconstrues Mr. Fischer's testimony. Although Mr. Fischer did state that the wires extending between the sensor and the cable correlated to opto-electrical componentry, (Sobon Decl. Ex. I at 141), he later clarified that

he misunderstood plaintiff's counsel's previous questions and that his prior response was incorrect. (Barone Reply Decl. Ex. 2 at 152). Thus, the deposition testimony cited by HTMI is of dubious value as support for its argument.

3. HTMI'S Reliance on The File History is Misplaced

HTMI next argues that the *file history* of the '001 patent establishes the proper meaning of opto-electrical componentry, as it is used in Claim 30. Specifically, HTMI highlights certain passages in the amendment filed by HTMI's attorneys in connection with the patent reexamination proceedings. (*See* Pl.'s Opp'n at 11; Sobon Decl. Ex. J.) This text states:

> The interior of the handle also remains sealed, for example, through the provision of the O-Rings. In this way, the endoscopic apparatus can be immersed in a sterilizing solution without affecting the *electro-optical componentry or interconnections* that extend through the handpiece to couple the camera to video imaging equipment.

(Sobon Decl. Ex. J at 9-10.) HTMI contends that this demonstrates that it intended the terms "electro-optical componentry" and "interconnections" to be used interchangeably.

The Court disagrees with HTMI's assertion that the file history explicitly equates opto-electrical componentry with the interconnections between the CCD sensor and the extension cables. The above passage cited by HTMI clearly uses the terms "electro-optical componentry" and "interconnections" in the *disjunctive*. While the word "or" can be used to signify words that are *synonymous*, it can also be used to indicate *alternative*

choices. (*See* Black's Law Dictionary 1095 (6th ed. 1990).) However, it is unclear from the file history which interpretation of the word "or" was intended. Moreover, there is nothing explicit in the above file history statement which suggests that HTMI intended to equate "electro-optical componentry" with either the "interconnections" or the term "opto-electrical componentry." Thus, contrary to HTMI argument, the file history simply does not clearly define the meaning opto-electric componentry in the manner so construed by HTMI.[5]

C. The Dictionary Definitions Provide the Ordinary Meaning of Opto-Electric

Because the specification and file history provide no decisive guidance in defining the term "opto-electronic componentry," this Court must determine the "ordinary meaning" of the claim at issue. *Hoganas AB v. Dresser Indus., Inc.*, 9 F.3d 948, 951 (9th Cir. 1994) ("Although a patentee *can* be his own lexicographer, . . . the words of a claim 'will be given their ordinary meaning, unless it appears that the inventor used them differently.'") (citations omitted).

The Court finds compelling the several definitions provided by New Image which were culled from various technical dictionaries. For example, *The New IEEE Standard Dictionary of Electrical and Electronics Terms,* (5th Ed. 1993), defines "optoelectronic" as:[6]

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5. The term used in Claim 30 is *opto-electrical*, not *electro-optical*. This distinction is noteworthy because the terms technically are *not* synonymous. *The Photonics Dictionary* specifically states that "Electro-optic is often erroneously used as a synonym [for optoelectronic]." (*See* Fischer Decl. Ex. 4.

6. The term "optoelectronic" is synonymous with "opto-electrical." (Fischer Decl. ¶ 16.)

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> Pertaining to a device that responds to optical power, emits or modifies optical radiation, or utilizes optical radiation for its internal operation. Any device that functions as an electrical-to-optical or optical-to-electrical transducer . . . .

(Fischer Decl. Ex. 4.; *see also The Photonics Dictionary,* (37th Ed. 1991) (identical definition).) From these definitions, it is evident that "opto-electric" components must, in some manner, convert optical power (photons) to electronic signal (electrons). *See id.* ¶ 15 and Ex. 4 (copies of excerpts from technical dictionaries which define "optoelectronic.").

HTMI does not controvert New Image's dictionary definitions.[7] Instead, HTMI asserts that these definitions are sufficiently broad such that "all the components that extend from the CCD sensor to the cable connector 'pertain to' the CCD sensor." (Pl.'s Opp'n at 15.) In essence, HMTI has defined opto-electric componentry as any device or part connected to an opto-electric device. However, such a construction would result in a definition of "opto-electric" based solely on the *physical proximity of the component*, as opposed to its *actual function.* Such a definition is so vague that it would effectively render the term "opto-electric componentry" meaningless. It is precisely for this reason that the Court, in its preliminary injunction order, seriously questioned whether HTMI would succeed on the merits on infringement based on Claim 30.[8]

7. Tellingly, HTMI does not attempt to explain its interpretation of the "ordinary meaning" of opto-electric. Instead, HTMI ignores the applicable rules of infringement analysis and argues that New Image's own evidence and testimony demonstrate that the AcuCam possesses opto-electric componentry within the meaning of Claim 30.

8. In the Court's preliminary injunction Order, this Court explained that:

(Cont'd)

Appendix B

Moreover, the dictionary definitions proffered by New Image clearly specify that "optoelectronic" relates to a device which "*responds* to optical power, *emits* or *modifies* optical radiation, or *utilizes* optical radiation for its *internal operation*." (Fischer Decl. Ex. 4 (emphasis added).). This definition is corroborated by the expert testimony adduced by New Image as well as by the technical articles authored by those skilled in the art. (*E.g.*, Fischer Decl. 15; Magen Decl. Ex. 1 (excerpts from deposition of Dominick Danna, an electrical engineer and endoscope designer)[9]; Magen Decl Ex. 2 (article by Hugo Vifian published in the *Microwave Journal*).)[10]

(Cont'd)

> HTMI, . . . assert[s] that the terms "opto-electric componentry" also encompass components which carry optical images in an electrical format, and as the AcuCam possesses such components between the CCD and the cable, it possesses this element of claim 30.
>
> *HTMI's description of opto-electrical componentry however. overly stretches the ordinary meaning of the term as defined above.* The CCD is the only component which the AcuCam possesses which fits within the plain meaning of the term "opto-electric." Furthermore, HTNI conceded at oral argument that the CCD in the AcuCam corresponds to the sensor of claim 30, and not to the optoelectric componentry.

(Order Granting P1.'s Mot. for Prelim. Inj. at 16 (emphasis added).)

9. In response to HTMI's attorney's questions, Mr. Danna testified at his deposition that an optoelectronic device is one which converts "photoenergy into electronic signals." (Sobon Decl. Ex. O at 124.) This is consistent with the various dictionary definitions discussed above and appended to the Fischer declaration.

10. In this article, Mr. Vifian writes:

(Cont'd)

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HTMI does not proffer its own definition of opto-electric, other than to state that opto-electric componentry essentially means anything between the sensor and the cable. Instead, HTMI attempts — unsuccessfully — to attack the evidence offered by New Image. For example, HTMI attempts to undermine the significance of Mr. Danna's testimony by noting that he stated that there "possibly" were other definitions to "optoelectronic" other than that which he had previously given. Unfortunately, HTMI, for reasons not evident from the record, did not query Mr. Danna any further concerning the nature of those other possible definitions.

HTMI's citation to the deposition testimony of George Sutton, one of New Image's experts, is equally misplaced. (Pl.'s Opp'n at 15.) In his deposition, Mr. Sutton testified that the wires in the AcuCam "carried" images taken by the CCD. (Sobon Decl. Ex. E. at 47.) This testimony does not — as argued by HTMI — establish that Mr. Sutton "thinks that all the components that extend from the CCD sensor to the cable connector 'pertain to' the CCD sensor." (Pl.'s Opp'n at 15.) Rather, Mr. Sutton simply acknowledged that the wires leading from the CCD act as a conduit for electrical signals produced by the CCD.

(Cont'd)

> The final group is the optoelectrical components. This group includes lightwave detectors or receivers, and demodulator sensors. *These components have optical input and electrical output ports. and are O/E [optical/ electrical] components.*

(Magen Decl. Ex. 2 at 68.) HTMI does not address the significance of this article in its opposition. Although HTMI raises an evidentiary objection to this article in its inappropriate and unauthorized surreply (*see* n.1), said objection is untimely, and therefore, is deemed waived.

At bottom, the Court rejects HTMI's contention that either Claim 30 or its file history explicitly equate "opto-electric componentry" with the interconnections between the CCD sensor and the external cable. The Court agrees with New Image that the ordinary meaning of the term "opto-electric componentry," as it is used in Claim 30, relates to an optical-to-electrical or an electrical-to-optical transducer extending from the sensor to the cable. If the drafters of the '001 patent had envisioned something different, they "could have prevented this result through clearer drafting." *Hoganas AB*, 9 F.3d at 951.

D. The AcuCam Does Not Contain Opto-Electric Componentry Within the Meaning of Claim 30

Having construed the proper scope of the limitation in Claim 30 at issue, the Court now proceeds to the second step of the infringement analysis and compares the subject claim with the structure of the AcuCam. *ZMI Corp.*, 844 F.2d at 1578. This portion of the Court's analysis focusses on whether the AcuCam contains "opto-electric componentry," as this phrase has been construed by the Court, extending "from said sensor through said handpiece to said cable."

There is no dispute that the only component in the AcuCam camera which has an opto-electrical function is the CCD, which corresponds to the "sensor" recited in Claim 30. (Fischer Decl. ¶¶, 19-20.) The components in the AcuCam that connect the CCD (sensor) to the cable in the handpiece consist of resistors, capacitors, logic Gates, transistors, diodes, voltage regulators and connectors (i.e., wires). (Sutton Decl. ¶ 17.) Unlike the CCD, none of these components, either individually or in combination, is "opto-electrical" as defined above. (Fischer Decl.

¶ 17; Sutton Decl. ¶ 17) Rather, each is a standard electrical component; none is an electrical-to-optic or optic-to-electrical transducer, (Sutton Decl. ¶ 17.)

Based on the foregoing, the Court concludes that the AcuCam does not possess "opto-electric componentry extending from said sensor through said handpiece to said cable," as recited in Claim 30 of the '001 patent.[11] Consequently, summary adjudication of independent Claim 30 and dependent Claim 32 in favor of defendant is proper.[12]

CONCLUSION

New Image has established that it has not infringed Claim 30 or 32 of the '001 patent. Therefore, for the reasons stated above,

IT IS HEREBY ORDERED THAT New Image's motion for partial summary judgment is GRANTED, and HTMI's cross-motion is DENIED.

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11. There is no dispute that Claim 32 is dependent on Claim 30. Therefore, the Court concludes that because the Acucam does not infringe Claim 30, it also does not infringe Claim 32. *Atlanta Motoring Accessories. Inc. v. Saratoga Technologies*, 33 F.3d 1362, 1364 (Fed. Cir. 1994).

12. In its moving papers, New Image argues that HTMI cannot rely on the doctrine of equivalents to show infringement of Claim 30. *See ZMI Corp.* 844 F.2d at 1581 (noting that the salient inquiry of the doctrine of equivalents is whether the accused device performs "substantially the same function in substantially the same way to achieve the same result." HTMI does not attempt to controvert this contention in its opposition. Therefore, the Court will construe this argument as having been conceded by HTMI in favor of New Image.

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IT IS FURTHER ORDERED THAT the parties appear for a status conference in the above-captioned matter, which shall take place on *June 22, 1995* at *3:45 p.m.*, in Courtroom 3 of the United States Courthouse, 1301 Clay Street, 3rd Floor, Oakland, California, 94612. At least ten (10) days prior to the conference, the parties shall file their Joint Status Conference Statement in accordance with Local Rule 235-3. Failure to timely file such a statement may result in sanctions.

IT IS SO ORDERED.

DATED: May 24, 1995

s/ Saundra Brown Armstrong
SAUNDRA BROWN ARMSTRONG
United States District Judge

APPENDIX C — EXCERPTED ORDER OF THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA FILED JUNE 3, 1994

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

No. C 93-4152 SBA (ARB)

HIGH TECH MEDICAL INSTRUMENTATION, INC., A Corporation,

Plaintiff,

vs.

NEW IMAGE INDUSTRIES, INC., A Corporation,

Defendant.

ORDER GRANTING PLAINTIFF'S MOTION FOR PRELIMINARY INJUNCTION

Plaintiff, High Tech Medical Instrumentation, Inc. ("HTMI"), is the assignee of rights to reexamined United States Patent number B1 4,858,001 ("the '001 patent"). The '001 patent generally relates to intraoral endoscopes used in dental procedures. HTMI has brought the present action against defendant New Image Industries, Inc. ("New Image"), alleging infringement of the '001 patent by New Image. Specifically, HTMI claims that New Image "AcuCam" intraoral endoscope infringes claims 24, 30 and 31 of the '001 patent. HTMI presently moves this Court to issue a preliminary injunction against New Image's continued infringement of claims 24 and 30 of the '001 patent.[1]

1. At oral argument, HTMI conceded that it was not relying (Cont'd)

Appendix C

* * *

New Image also contends that the AcuCam does not possess "opto-electric componentry" as that term is properly defined and claimed in claim 30. New Image asserts that there is no definition of opto-electric componentry within the '001 patent specification, and as a result, the ordinary meaning of that term is used. In this regard, New Image supplies the two following relevant definitions of opto-electric:

> *optoelectronic* — Pertaining to a device that responds to optical power, emits or modifies optical radiation, or utilizes optical radiation for its internal operation. Any device that functions as an electrical to optical or optical to electrical transducer . . . *Photonic Dictionary* 894 (1992).

> *optoelectronic* (fiber optics) — Pertaining to a device that responds to optical power, emits or modifies optical radiation, or utilizes optical radiation for its internal operation. Any device that functions as an electrical-to-optical or optical-to-electrical transducer . . . *The New IEEE Standard Dictionary of Electrical and Electronics Terms* 894 (5th ed. 1993)

New Image contends that the basic element of the AcuCam camera, the charge-coupled device ("CCD") is the only component in the AcuCam which functions as an optical-electrical or electrical-optical transducer, and that this CCD

(Cont'd)
upon the infringement of claim 31 as establishing a basis for its motion. (Reporter's Transcript ("RT") at 22:7-10.) Accordingly, the Court will not address this claim.

corresponds to the "sensor" of claim 30. Furthermore, New Image maintains that there is no "opto-electric componentry" connecting the CCD or sensor to the cable as required by claim 30. HTMI, on the other hand, asserts that the terms "opto-electric componentry" also encompass components which carry optical images in an electrical format, and as the AcuCam possesses such components between the CCD and the cable, it possesses this element of claim 30.

HTMI's description of opto-electrical componentry, however, overly stretches the ordinary meaning of the term as defined above. The CCD is the only component which the AcuCam possesses which fits within the plain meaning of the term "opto-electric." Furthermore, HTMI conceded at oral argument that the CCD in the AcuCam corresponds to the sensor of claim 30, and not to the optoelectric componentry. Accordingly, a serious question is raised as to whether HTMI would be likely to succeed on the merits of proving infringement of claim 30 by the accused device.

* * *

APPENDIX D — ORDER OF THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT DENYING PETITION FOR REHEARING FILED FEBRUARY 2, 1998

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

97-1143

HIGH TECH MEDICAL INSTRUMENTATION, INC.,

Plaintiff-Appellant,

v.

NEW IMAGE INDUSTRIES INC.,

Defendant-Appellee,

and

PERRY MICHAEL WILLIAMS and ACUIMAGE CORPORATION,

Defendants.

Before MAYER, Circuit Judge, SCHALL, Circuit Judge, and BRYSON, Circuit Judge.

A petition for rehearing having been filed by the APPELLEE, UPON CONSIDERATION THEREOF, it is ORDERED that the petition for rehearing be, and the same hereby is, DENIED.

The mandate of the court will issue on February 9, 1998.

Appendix D

FOR THE COURT,
JAN HORBBALY, CLERK

Dated: February 2, 1998

by s/ Alex Van Veen
Alex Van Veen
Staff Law Clerk

cc: JACK L. SLOBODIN
MARK E. MILLER

HIGH TECH MED INSTR V NEW IMAGE IND, 97-1143
(DCT- 93-CV-4152)

APPENDIX E — JUDGMENT OF THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT DATED DECEMBER 24, 1997

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

97-1143

HIGH TECH MEDICAL INSTRUMENTATION, INC.,

Plaintiff-Appellant,

v.

NEW IMAGE INDUSTRIES INC.,

Defendant-Appellee,

and

PERRY MICHAEL WILLIAMS and ACUIMAGE CORPORATION,

Defendants.

JUDGMENT

ON APPEAL from the UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF CALIFORNIA

in CASE NO(S). 93-CV-4152

This CAUSE having been heard and considered, it is

Appendix E

ORDERED and ADJUDGED: ***VACATED*** **and** ***REMANDED***

ENTERED BY ORDER OF THE COURT

s/ Jan Horbaly
Jan Horbaly, Clerk

DATED DEC 24 1997

ISSUED AS A MANDATE: FEB -9 1998